



## Questions and Answers: Proposed Rule to List the Three Forks springsnail and the San Bernardino springsnail

Arizona Ecological Services Field Office

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**Q: What are the Three Forks springsnail and the San Bernardino springsnail?**

**A:** Both the Three Forks springsnail (*Pyrgulopsis trivialis*) and the San Bernardino springsnail (*Pyrgulopsis bernardina*) are members of the snail family Hydrobiidae (Gastropoda). Three Forks springsnail is a variably sized species, with a shell height 1.5 to 4.8 mm. The San Bernardino springsnail is a species with a narrow-conic shell, height 1.3 to 1.7 mm.

**Q: Where are these snails found?**

**A:** The Three Forks springsnail was historically distributed in at least two separate spring complexes, Three Forks springs (T5N, R29E) and Boneyard Bog springs (T6N, R29E) in the North Fork East Fork Black River Watershed of the White Mountains in Apache County, east-central Arizona. These spring complexes are found in open mountain meadows at elevations of approximately 2,500 m, separated by about 6 km of perennial flowing stream. The Three Forks springsnail has been known from free-flowing springheads, concrete boxed springheads, spring runs, and spring seepage. The Three Forks springsnail was recently documented in springs along Boneyard Creek.

The historical range of the San Bernardino springsnail in the U.S. may have included several populations along the headwaters of the Rio Yaqui, but the species has only been confirmed from three springs (Snail Spring, Goat Tank Spring, and Horse Spring) on the John Slaughter Ranch, Cochise County, Arizona. New information received since the proposal was published shows that springsnail populations in Sonora, Mexico, are San Bernardino springsnails, indicating the species is more widely distributed than previously believed.

**Q: What is the natural history of these snails?**

**A:** In the arid southwest, snails of the family Hydrobiidae are largely relicts of the Pleistocene, and are typically distributed across the landscape as geographically isolated populations. Springsnails are strictly aquatic and respiration occurs through an internal gill. These snails are egg-layers and upon hatching, tiny snails crawl out into their adult habitat.

Springsnails graze primarily on periphyton (algae). The life span for most aquatic snails is usually 9 to 15 months. Natural predators include waterfowl, shorebirds, amphibians, fishes, crayfish, leeches, and aquatic insects. Aquatic snails are known to serve as intermediate hosts for a variety of parasites, particularly trematodes. The most common habitat for *Pyrgulopsis* is a “rheocene” – a spring emerging from the ground as a free-flowing stream.

**Q: What is a proposed rule to list a species?**

**A:** Under the Endangered Species Act (Act), the U.S. Fish and Wildlife Service is responsible for identifying species of plants and animals that may be threatened or endangered with extinction.

A proposed rule is the Service's proposal to determine threatened or endangered status for the species of concern. A proposed rule allows the Service to inform the public of the proposed rulemaking, identify specific issues, and solicit public comments. The Service will issue a final decision regarding the species within 12 months of issuance of the proposed rule, and after consideration of all public comments received.

**Q: What is the Service's proposed determination for these species?**

**A:** On April 11, 2011, the Service proposed that the Three Forks springsnail and San Bernardino springsnail be listed as endangered through all their range and proposed designating approximately 13 acres of critical habitat (six units). On November 26, 2011, the Service revised the critical habitat proposal for the Three Forks springsnail.

**Q: Where is critical habitat proposed?**

**A:** Six localized critical habitat units – totaling about 13 acres – were initially proposed. Critical habitat for the Three Forks springsnail was proposed for 11.1 acres at the Boneyard Bog and Three Forks spring complexes on the Apache-Sitgreaves National Forest. However, as a result of information received since the proposal was published, the Service is proposing to revise the critical habitat designation by increasing the size of Boneyard Bog Springs Unit to 5.3 acres and adding the Boneyard Creek Unit for a grand total of 17.1 acres. San Bernardino springsnail critical habitat is proposed for 1.21 acres (three units at Snail Spring, Goat Tank Spring and Horse Spring) on the John Slaughter Ranch, Cochise County, Arizona, and 0.8 acres on San Bernardino National Wildlife Refuge. The Service does not designate critical habitat in foreign countries.

**Q: What is critical habitat?**

**A:** Critical habitat is a term in the Act that identifies geographic areas containing features essential for the conservation of a threatened or endangered species, and which may require special management considerations or protection. Designation of critical habitat does not affect land ownership, establish a refuge or preserve and has no impact on private landowners taking actions on their land that do not require federal funding or permits. Federal agencies that undertake, fund or permit activities that may affect critical habitat are required to consult with the Service to ensure such actions do not adversely modify or destroy designated critical habitat.

When specifying an area as critical habitat, the Act requires the Service to consider economic impacts, the impact to national security, and other relevant impacts of the designation. If the benefits of excluding an area outweigh the benefits of designating it, the Secretary of Interior may exclude an area from critical habitat, unless the exclusions would result in the extinction of a threatened or endangered species. The Service has prepared a draft economic analysis of the proposed critical habitat and is seeking comments on it.

**Q: What prompted the Service to make this determination at this time?**

**A:** We first identified Three Forks springsnail as a candidate for listing in the October 30, 2001, Review of Plant and Animal Species That Are Candidates or Proposed for Listing as Endangered or Threatened, Annual Notice of Findings on Recycled Petitions, and Annual Description of Progress on Listing Actions (66 FR 54808). We first identified San Bernardino springsnail as a candidate for listing in the December 6, 2007, Review of Native Species That Are Candidates for Listing as Endangered or Threatened; Annual Notice of Findings on Resubmitted Petitions; Annual Description of Progress on Listing Actions (72 FR 69034).

On May 4, 2004, the Center for Biological Diversity petitioned the Service to list 225 species of plants and animals as endangered under the provisions of the Act, including Three Forks springsnail. On June 25, 2007, we received a petition from Forest Guardians to list 475 species in the southwest United States as threatened or endangered under the provisions of the Act, including

San Bernardino springsnail. In our Notice of Review, dated December 6, 2007, we retained candidate status for Three Forks springsnail and assigned candidate status to San Bernardino springsnail, but determined that publication of a proposed rule to list these species was precluded by work on higher priority listing actions. We have since determined we now have the available resources to initiate a rulemaking process for both species.

**Q: What does “endangered” mean?**

**A:** The term “endangered species” means any species which is in danger of extinction throughout all or a significant portion of its range.

**Q: What are the threats to these snails?**

**A:** The primary threats to the Three Forks springsnail include wildfire, exposure to fire retardant drift, habitat degradation related to elk grazing, and predation by nonnative crayfish. The primary threats to the San Bernardino springsnail include habitat loss caused by groundwater depletion and potential habitat degradation related to pesticides.

**Q: Are there efforts underway to conserve these snails?**

**A:** We are currently working with the Arizona Game and Fish Department and the Phoenix Zoo to establish a captive propagation program for the Three Forks springsnail. This effort is already underway, and several hundred Three Fork springsnails are currently being held at the Zoo. The Arizona Game and Fish Department also conducts crayfish trapping at Three Forks springs to reduce predatory pressure. We have restored a spring on the San Bernardino National Wildlife Refuge for the potential translocation of San Bernardino springsnails.

**Q: How can the public participate in conservation of these snails?**

**A:** The public can initiate or participate in on-going projects to 1) control the spread of nonnative species such as crayfish and New Zealand mudsnail; and 2) protect the integrity of spring ecosystems harboring these species. Owners of land that support spring ecosystems within the same watersheds can allow surveys and implement conservation actions if springsnails occur on their land. The Service’s Partners in Fish and Wildlife Program (602/242-0210 x250) can provide technical and financial assistance.

**Q: How can you comment on this proposed listing?**

**A:** Comments on the proposed rule can be submitted electronically at <http://www.regulations.gov> or by mail to Public Comments Processing, Attn: Docket FWS-R2-ES-2009-0083; Division of Policy and Directives Management; U.S. Fish and Wildlife Service, 4401 N. Fairfax Dr., Ste 222, Arlington, VA 22203. Comments are due by December 19, 2011. Requests for copies of the proposal, revision, additional information, and the draft economic analysis of the critical habitat proposal can be submitted to Field Supervisor, U.S. Fish and Wildlife Service, 2321 W. Royal Palm Rd., Suite 103, Phoenix, AZ 85021-4951; phone 602/242-0210 or fax 602/242-2513. The documents are also available on the Internet at: <http://www.fws.gov/southwest/es/arizona/>.